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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,310	02/06/2004	Alexander Epple	Q79380	7421
23373	7590	04/05/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			RAIZEN, DEBORAH A	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,310

Applicant(s)

EPPLE ET AL.

Examiner

Deborah A. Raizen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 and 38-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22, 25-36 and 38-42 is/are allowed.
- 6) ☒ Claim(s) 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Schuster (6,169,627).

Schuster discloses a catadioptric projection lens (Fig. 1) for imaging a pattern situated in an object plane (0) of the projection lens onto an image plane (61) of the projection lens while creating a real intermediate image (Z), comprising:

a catadioptric section (from 0 to 23, after reflection at 21) with a concave mirror (21) and a beam deflector (mirror 23) located between said object plane and said image plane; and

a dioptric section (24 to 60) arranged following said beam deflector;

said dioptric section starting after a final reflective surface (23) of said catadioptric section and comprising at least one lens (any of the three lens elements having surfaces 24 to 29) arranged between said final reflective surface and said intermediate image; and

said beam deflector (23) having only a single reflective surface (23) arranged such that it reflects radiation coming from the concave mirror (21) to said dioptric section.

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3. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Ishiyama et al. (5,694,241). Ishiyama discloses a catadioptric projection lens (Fig. 5 and Table 3, third embodiment) for imaging a pattern situated in an object plane (R(P1)) of the projection lens onto an image plane (W(P2)) of the projection lens while creating a real intermediate image (I(P3)), comprising:

a catadioptric section (from the object plane to the exit surface of the beam-splitter, after reflection at mirror M1) with a concave mirror (M1) and a beam deflector (beam-splitter BS) located between said object plane and said image plane (Fig. 5); and

a dioptric section (lens groups G4 and G3, from lens element L4a in lens group G4 to lens element L3n in lens group G3; M2 is a folding mirror, permitted within the dioptric section according to the specification of the current application, and further disclosed in Ishiyama to be unnecessary, col. 10, lines 48-50) arranged following said beam deflector (Fig. 5);

said dioptric section starting after a final reflective surface (BSa) of said catadioptric section and comprising at least one lens arranged between said final reflective surface and said intermediate image (lens elements L4a and L4b); and

said beam deflector (BS) having only a single reflective surface (BSa) arranged such that it reflects radiation coming from the concave mirror (M1) to said dioptric section (G4-G3; Fig. 5).

Double Patenting

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v.*

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Eagle Mfg. Co., 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

5. Claim 23 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 23 of prior U.S. Patent No. 6,717,746. This is a double patenting rejection.

The slight differences in wording do not change the subject matter claimed. Claim 23 in the current application omits the labels first and second for the catadioptric section and dioptric section, but those labels have no impact on the scope of the claim. Claim 23 in the current application also changes the term “beam-deflecting device” to “beam-deflector”, which means the same.

Terminal Disclaimer

6. The terminal disclaimer filed on January 10, 2005, has been reviewed and is accepted (DISQ 02/03/2005). The terminal disclaimer has been recorded.

Response to Arguments

7. Applicant's arguments, see Remarks, filed January 10, 2005, with respect to the rejection(s) of claim(s) 1-24 under obviousness-type double patenting have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection of claim 23 is made under statutory double patenting in view of the absence of difference in subject matter claimed in claim 23 of the parent patent and claim 23 of the current application. Also upon further consideration, new rejections of claim 24,

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which is broader than claim 24 of the parent, are made in view of Schuster and of Ishiyama, as detailed above under Claims Rejections--35 U.S.C. §102.

8. Applicant's arguments, see Remarks, filed January 10, 2005, with respect to the rejection of claims 25-28, 30-34, and 36-40 under 35 U.S.C. §102 as anticipated by Shafer et al. have been fully considered and are persuasive. The rejection of claims 25-28, 30-34, 36-40 as anticipated by Shafer et al. has been withdrawn.

Allowable Subject Matter

9. Claims 1-22, 25-36, and 38-42 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of claims 1-22, 25-36, and 38-42, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper.

The prior art fails to teach a combination of all the features in claims 1, 20, and 21. For example, these features include the detailed structure recited, especially limitation creating a real intermediate image, the limitation that the beam deflector is a geometric beam splitter, the order specified by the phrases starting with "arranged" and "starting" (or "located" in claim 20), and the limitation that the dioptric section comprises at least one lens arranged between the final reflective surface and the intermediate image, in combination with all the other limitations of the respective claims.

The prior art fails to teach a combination of all the features in claim 25. For example, these features include the detailed structure recited, especially the limitation creating at least one

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real intermediate image, a geometric beam splitter, the limitations that specify an order (including functional limitations), and the limitation that at least one lens is arranged between the reflective surface of the geometric beam splitter and the intermediate image, in combination with all the other limitations of the claim.

The prior art fails to teach a combination of all the features in claim 31. For example, these features include the detailed structure recited, especially the limitation creating at least one real intermediate image, a geometric beam splitter, the limitations that specify an order (including functional limitations), and the limitation that at least one lens is arranged between the reflective surface of the geometric beam splitter and the intermediate image, in combination with all the other limitations of the claim.

The prior art fails to teach a combination of all the features in claim 38. For example, these features include the detailed structure recited, especially the limitation creating at least one real intermediate image, a geometric beam splitter, the limitations that specify an order (including functional limitations), the limitation that at least one lens is arranged between the intermediate image and the second reflective surface, and the limitation that the intermediate image is situated freely accessible in an empty space at a distance from a nearest optical component, in combination with all the other limitations of the claim.

The rest of the allowed claims depend on allowed claims and are therefore allowed as well.

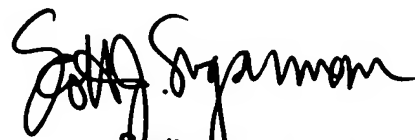
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah A. Raizen, Ph.D., J.D., whose telephone number is (571) 272-2336. The examiner can normally be reached on Monday-Friday, from 10:00 a.m. to 3:00 p.m. Eastern Standard Time (a part-time schedule).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The USPTO central official fax number is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. For more information, see <http://pair-direct.uspto.gov>. For access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or at 703-305-3028 or at 703-308-6845, or by e-mail at: ebc@uspto.gov. Additional information is available on the Patent EBC Web site at: <http://www.uspto.gov/ebc/index.html>.

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Scott J. Sugerman
Primary Examiner